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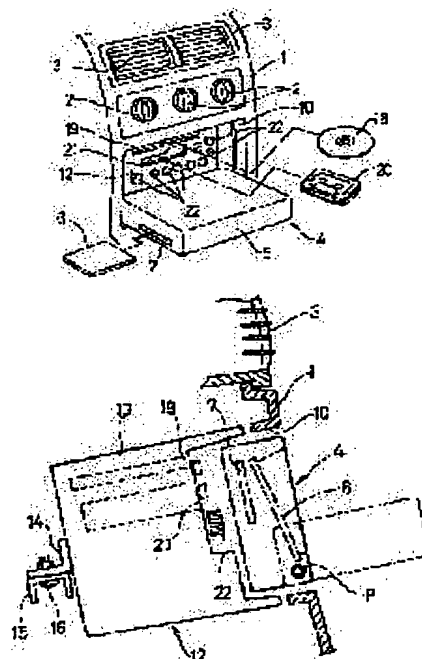
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(54) ON-VEHICLE DEVICE

(57)Abstract:

PURPOSE: To dispense with an outside exposure of an insertion port, while it is not used so as to prevent a dust invasion by providing a software insertion port, on the face of an insertion part, which is stored inside an instrument panel in the storage position of the insertion part and is exposed to the outside in an exposure position.

CONSTITUTION: In the depths of a storage part, 10 of an instrument panel 1, an audio equipment 12 is arranged, and a flange 14, which is fixed in a vehicle body side supporting member 15, is arranged in the back face of the audio equipment main body 13. When software 6 is inserted to a navigation device 4 serving as a on-vehicle device, an insertion part main body 5 is pushed down to a vehicle interior side so as to expose an insertion port 7 to the outside. The insertion part main body 5 is set in a standing position and can be stored in the storage part 10 at any time excepting insertion of the software 6. In this way, the insertion port 7 is not exposed to the outside while the insertion part main body 5 is in the storage position, so that a dust invasion is prevented. On the other hand, a dust invasion from insertion ports 19, 21 is also prevented as the insertion ports 19, 21 of the audio equipment 12 are blocked by the insertion part main body 5.



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CLAIMS

[Claim(s)]

[Claim 1] The stowed position contained by the instrument panel in said insertion section in the automobile whose insertion of software was enabled at the insertion section of the mounted equipment which constitutes hardware, Migration is made free between the exposure locations exposed to an instrument-panel empty vehicle room side. Mounted equipment characterized by preparing this software insertion opening in the field of the insertion section which it is contained in an instrument panel in the stowed position of said insertion section, and is exposed outside in an exposure location while preparing software insertion opening in said insertion section.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to mounted equipment.

[0002]

[Description of the Prior Art] By automobile in recent years, it prepares in in the car navigation equipment (NAVI system), and there are some which told the operator about the traffic information. He is trying for such navigation equipment to insert software from insertion opening which prepared the insertion section of software, such as an IC card, in the instrument panel near the driver's seat while preparing the display in the instrument panel, and was prepared in this insertion section.

[0003]

[Problem(s) to be Solved by the Invention] However, in the former, since the insertion opening 100 is formed in the top face of the insertion section 101 as shown in drawing 5 , and the insertion opening 101 was moreover always outside exposed, there was a possibility that dust etc. might trespass upon the interior from this insertion opening 101.

[0004]

[Means for Solving the Problem] The stowed position contained by the instrument panel in said insertion section in the automobile made free [insertion of software] for this invention in the insertion section of the mounted equipment which constitutes hardware in order to solve said technical problem, Migration is made free between the exposure locations exposed to an instrument-panel empty vehicle room side. While preparing software insertion opening in said insertion section, it is characterized by preparing this software insertion opening in the field of the insertion section which it is contained in an instrument panel in the stowed position of said insertion section, and is exposed outside in an exposure location.

[0005]

[Function] Since software insertion opening is prepared in the field of the insertion section which it is contained in an instrument panel in the stowed position of the insertion section, and is exposed outside in an exposure location, except the time of use, exposing outside of insertion opening is lost and it can prevent invasion of dust etc.

[0006]

[Example] Suitable 1 example of this invention is explained based on an accompanying drawing below. The important section perspective view of the center of an instrument panel and drawing 3 are the 3-3 line sectional views of drawing 1 in that in the condition that drawing 1 toppled the important section perspective view of the center of an instrument panel of an automobile, and drawing 2 toppled the body, among these drawings, in an instrument panel and 2 --, operating members, such as an air-conditioner, and 3 show the outlet of an air-conditioner, and 4 shows [one] navigation equipment. The body 5 of navigation equipment 4 is making the insertion section which inserts the software 6, such as an IC card, serve a double purpose, and it prepares a display 8, operating member 9 --, etc. in a front face while it forms the insertion opening 7 in the side face of this body 5. Although the insertion section was made into a body 5 and one in this way in this example, this is good also considering the body 5 which may constitute

separately, namely, prepares a display 8, operating member 9 --, etc., and the insertion section which forms the insertion opening 7 as another object. The lower limit of this body 5 is attached free [rocking] to the stowage 10 of an instrument panel 1 through PIPOTTO P, as shown in drawing 3 , as shown in the fictitious outline of drawing 2 or drawing 3 , it can also be pushed down to a vehicle room side, and the condition of drawing 1 is [the condition of a stowed position, drawing 2 , and the fictitious outline of drawing 3] an exposure location. By the stowed position of a body 5, the insertion opening 7 is located in a stowage 10, and is not exposed outside (vehicle room side), but, on the other hand, the insertion opening 7 is exposed outside in the exposure location of a body 5 so that these drawings may also show.

[0007] Audio equipment 12 is arranged in the inner part of said stowage 10, as shown in drawing 3 , a mounting flange 14 is formed in the tooth back of the body 13 of audio equipment 12, and this mounting flange 14 is fixed to the car-body side supporter material 15 through a screw 16. The insertion opening 19 of CD software 18 and the insertion opening 21 of a cassette tape 20 are formed in the front face of said body 13, and various operating member 22 --, such as volume control, is arranged in the front face of a body 13.

[0008] Since a body 5 is moved to a vehicle room position as shown in drawing 2 and the insertion opening 7 is exposed to a vehicle room side in case software 6 is inserted above by this example at navigation equipment 4, software 6 is inserted. Therefore, if a body 5 can be contained to a stowage 10 except the time of insertion of software 6 as shown in drawing 1 , and the body 5 is made into the stowed position in this way, the insertion opening 7 cannot be exposed outside but it can prevent that dust etc. trespasses upon the interior from this insertion opening 7. Moreover, if the body 5 is made into the stowed position, since this body 5 can close the insertion openings 19 and 21 of audio equipment 12, it can also be prevented that dust etc. invades in audio equipment 12 from these insertion openings 19 and 21. Furthermore, insertion actuation can be made easy to be able to insert in the insertion opening 7 from the side, i.e., a longitudinal direction, in case software 6 is inserted, and to perform, since the insertion opening 7 is formed in the side face of a body 5 in this example.

[0009] Although navigation equipment was mentioned as the example as mounted equipment in the example mentioned above, this example is not restricted to this and can be applied to other mounted equipments. For example, as shown in drawing 4 , it is good also considering mounted equipment as audio equipment, and in this example, while making a body 50 rockable like a last example, the insertion opening 52 of CD software 51 is formed in the side face of this body 50. The operation effectiveness is the same as a last example.

[0010]

[Effect of the Invention] Since software insertion opening is prepared in the field of the insertion section which it is contained in an instrument panel in the stowed position of the insertion section, and is exposed outside in an exposure location according to this invention as stated above, except the time of use, exposing outside of insertion opening is lost and it can prevent invasion of dust etc.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The important section perspective view of the center of an instrument panel.

[Drawing 2] The important section perspective view of the center of an instrument panel in the condition of having pushed down the insertion section.

[Drawing 3] The 3-3 line sectional view of drawing 1 .

[Drawing 4] The same drawing as drawing 3 concerning another example.

[Drawing 5] The perspective view of the conventional insertion section.

[Description of Notations]

1 -- Instrument panel

4 -- Mounted equipment

5 -- Insertion section

6 -- Software

7 -- Insertion opening

[Translation done.]

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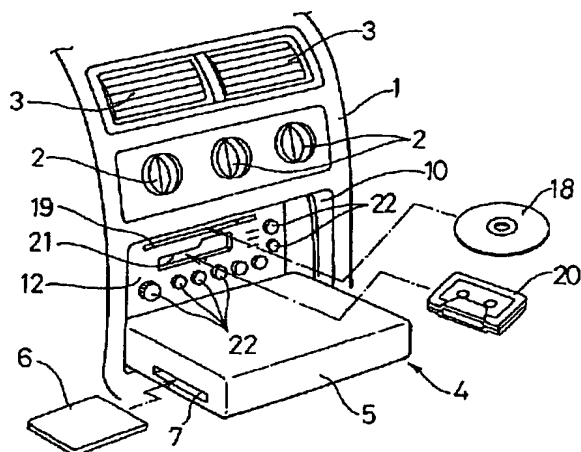
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(54)【発明の名称】 車載装置

(57)【要約】

【目的】 車載装置の挿入口からゴミ等が侵入するのを防ぐ。

【構成】 ハードを構成する車載装置の挿入部にソフトを挿入自在とした自動車に於いて、前記挿入部をインストールメントパネルに収納される収納位置と、インストールメントパネルから車室内側へ露出する使用位置との間で移動自在とし、前記挿入部にソフト挿入口を設けるとともにこのソフト挿入口を前記挿入部の収納位置でインストールメントパネル内に収納され且つ使用位置で外部に露出する挿入部の面に設ける。



【特許請求の範囲】

【請求項1】 ハードを構成する車載装置の挿入部にソフトを挿入自在とした自動車に於いて、前記挿入部を、インストルメントパネルに収納される収納位置と、インストルメントパネルから車室側へ露出する露出位置との間で移動自在とし、前記挿入部にソフト挿入口を設けるとともにこのソフト挿入口を前記挿入部の収納位置でインストルメントパネル内に収納され且つ露出位置で外部に露出する挿入部の面に設けたことを特徴とする車載装置。

【発明の詳細な説明】

【0001】

【産業上の利用分野】本発明は、車載装置に関するものである。

【0002】

【従来の技術】近年の自動車では、車内にナビゲーション装置（NAVIシステム）設け、道路情報を運転者に知らせるようにしたものがある。このようなナビゲーション装置は、インストルメントパネルに表示部を設けるとともに運転席近傍もしくはインストルメントパネルにICカード等のソフトの挿入部を設け、この挿入部に設けた挿入口からソフトを挿入するようにしている。

【0003】

【発明が解決しようとする課題】ところが、従来に於いては、図5に示すように挿入口100が挿入部101の上面に設けられており、しかも常時挿入口101が外部に露出しているので、この挿入口101からゴミ等が内部に侵入する虞れがあった。

【0004】

【課題を解決するための手段】前記課題を解決するため本発明は、ハードを構成する車載装置の挿入部にソフトを挿入自在とした自動車に於いて、前記挿入部をインストルメントパネルに収納される収納位置と、インストルメントパネルから車室側へ露出する露出位置との間で移動自在とし、前記挿入部にソフト挿入口を設けるとともにこのソフト挿入口を前記挿入部の収納位置でインストルメントパネル内に収納され且つ露出位置で外部に露出する挿入部の面に設けたことを特徴とする。

【0005】

【作用】ソフト挿入口を、挿入部の収納位置でインストルメントパネル内に収納され且つ露出位置で外部に露出する挿入部の面に設けるので、挿入口は使用時以外では外部に露出することがなくなり、ゴミ等の侵入を防ぐことができる。

【0006】

【実施例】以下に本発明の好適1実施例を添付図面に基づいて説明する。図1は自動車のインストルメントパネル中央の要部斜視図、図2は本体を倒した状態でのインストルメントパネル中央の要部斜視図、図3は図1の3-3線断面図で、これらの図中、1はインストルメント

パネル、2…はエアコンディショナー等の操作部材、3はエアコンディショナーの吹出口、4はナビゲーション装置を示す。ナビゲーション装置4の本体5は、ICカード等のソフト6を挿入する挿入部を兼用しており、この本体5の側面には挿入口7を形成するとともに前面には表示部8、操作部材9…等を設ける。本実施例ではこのように挿入部を本体5と一体としたが、これは別々に構成してもよく、即ち、表示部8、操作部材9…等を設ける本体5と挿入口7を設ける挿入部とを別体としてもよい。この本体5の下端は図3に示すようにピボットPを介してインストルメントパネル1の収納部10に対して揺動自在に取付けられており、図2、もしくは図3の想像線に示すように車室側へ倒すこともでき、図1の状態が収納位置、図2、及び図3の想像線の状態が露出位置である。これらの図面からも分るように本体5の収納位置では挿入口7は収納部10内に位置して外部（車室側）に露出せず、一方、本体5の露出位置では挿入口7は外部に露出する。

【0007】前記収納部10の奥にはオーディオ装置12を配置し、図3に示すようにオーディオ装置12の本体13の背面には取付けフランジ14を設け、この取付けフランジ14を車体側支持部材15にビス16を介して固定する。前記本体13の前面にはCDソフト18の挿入口19、カセットテープ20の挿入口21を形成し、又、本体13の前面には音量調節等の各種操作部材22…を配設する。

【0008】以上に於いて、本実施例ではナビゲーション装置4にソフト6を挿入する際には図2に示すように本体5を車室側に倒し、挿入口7を車室側に露出させてからソフト6を挿入する。従ってソフト6の挿入時以外は図1に示すように本体5を収納部10に収納しておくことができ、このように本体5を収納位置にしておけば、挿入口7は外部に露出せず、この挿入口7からゴミ等が内部に侵入するのを防止することができる。又、本体5を収納位置にしておけば、オーディオ装置12の挿入口19、21をこの本体5で塞ぐことができるので、これらの挿入口19、21からオーディオ装置12内にゴミ等が侵入することも防止することができる。更に本実施例では挿入口7は本体5の側面に形成されているので、ソフト6を挿入する際には側方から、即ち、左右方向から挿入口7に挿入でき、挿入操作を行い易くすることができる。

【0009】前述した実施例では車載装置としてナビゲーション装置を例に挙げたが、本実施例はこれに限られるものではなく、他の車載装置にも応用できるものである。例えば、図4に示すように車載装置をオーディオ装置としてもよく、この実施例では本体50を前実施例同様揺動可能とするとともにこの本体50の側面にCDソフト51の挿入口52を形成している。作用効果は前実施例と同様である。

【0010】

【発明の効果】以上述べたように本発明によれば、ソフト挿入口を、挿入部の収納位置でインストールパネル内に収納され且つ露出位置で外部に露出する挿入部の面に設けるので、挿入口は使用時以外では外部に露出することがなくなり、ゴミ等の侵入を防ぐことができる。

【図面の簡単な説明】

【図1】インストールパネル中央の要部斜視図。

【図2】挿入部を倒した状態でのインストールパネル中央の要部斜視図。

*10

*【図3】図1の3-3線断面図。

【図4】別実施例に係る図3と同様の図。

【図5】従来の挿入部の斜視図。

【符号の説明】

1…インストールパネル

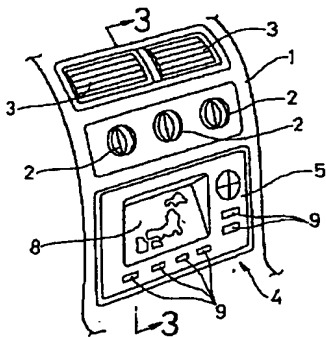
4…車載装置

5…挿入部

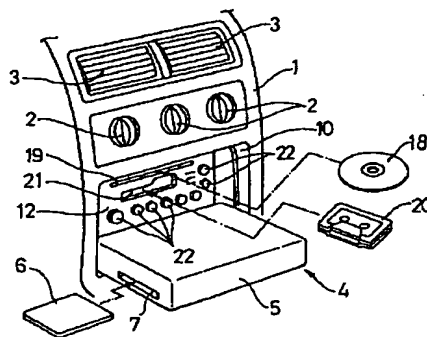
6…ソフト

7…挿入口

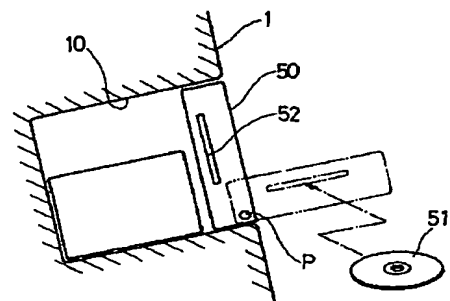
【図1】



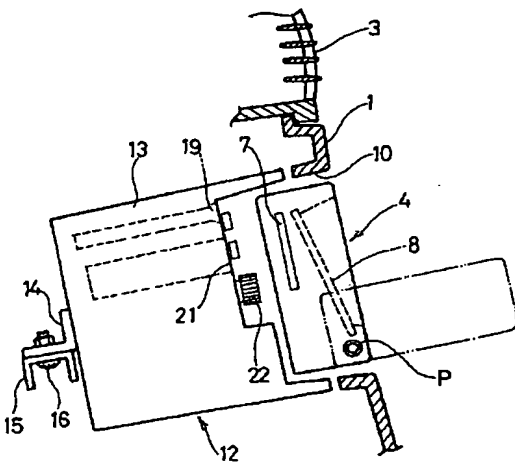
【図2】



【図4】



【図3】



【図5】

